Number 30 October 2013

Flightfax®

Online Newsletter of Army Aircraft Mishaps

0.72

Why make this number so big? There are two reasons. One – although it's a big number in physical appearance, it's not a big number when you're talking Class A accident rates for flight mishaps. The 0.72 represents the rate of Class A flight mishaps per 100,000 hours of flying (fixed and rotary wing). It is the second lowest on record and one of only four rates that have fallen below the 1.0 mark in the last 40 plus years (see chart page 6).

It's a good news story. FY2013 reflects one of the safest years on record for Army aviation. An overview of the preliminary data found in the next couple of pages will show that 2013 had only half the mishaps of those reported in 2012. Can the genesis of this year's safety success be traced back to the basics of leadership engagement and adherence to standards and discipline? Hard to say - but the improvement displayed this year over past years does reflect the efforts and dedication of all the individuals involved in the safety efforts of our aviation community.

But with the good comes the challenge. In safety, the numbers and rates can never be low enough so you are always striving to improve the record. In effect, you're setting the bar higher by trying to go lower. Continuing to scrutinize your risk management processes, keeping your leaders actively engaged, and executing tasks/missions to the established standards will go a long way in minimizing the risk that leads to accidents. It's a team sport with individual effort. The more individuals are putting forth the effort, the stronger the team.

In addition to the fiscal year review found in this month's newsletter, DES discusses the Army standardization policy, and the Blast From the Past reminds us of the true cost of the accident numbers.

Earlier it was mentioned there were two reasons the number at the top was so large. One was the good news story. The second is it takes up enough space that you don't feel you must expound on limited value information to try and fill white space - like many of us used to do on our unit training calendars...come on, be honest!

Aviation Directorate, U.S. Army Combat Readiness/Safety Center

Preliminary Report on FY13 Aircraft Accidents

In the **manned aircraft** category, Army Aviation experienced 61 Class A-C aircraft accidents in FY13. This is a decrease from the 124 Class A-C aircraft accidents in FY12, including a decrease in Class A mishaps.

	2012	**2013**
CLASS A	19	**8**
CLASS B	17	**7**
CLASS C	88	**46**
TOTAL	124	**61**
FATALITIES	12	**8**

CLASS A and B Summary: There were 15 Class A and B mishaps, 4 of which occurred at night. Human error was the cause factor in 13 (87%) of the 15 mishaps. Materiel failure or suspected materiel failure was contributing in 2 (13%) of the 15 mishaps.

The flight category Class A mishap rate (RW+FW) for FY13 was 0.72 (0.72 class A flight mishaps per 100,000 hours of flight time). For FY 12, the rate was 1.53.

Operational Assessment Concerns:

Human Error: Dust landings were contributing factors in one Class A, one Class B, and two Class C aircraft mishaps. One NVG Class A (five fatalities) occurred due to spatial disorientation with low illumination and lack of terrain contrast as contributing factors. Power management contributed to one Class A, one Class B, and one Class C incident. Additional Class A mishaps included two UH-60 ground taxi mishaps and one blade strike during a NVG slope landing.

Materiel Failures: Materiel failures included one engine failure and one catastrophic main rotor system failure.

2013 Breakdown by aircraft type:

	Class A	Class B	Class C
UH/MH-60	5	3	16
AH-64	1	0	4
CH/MH-47	1	2	8
OH-58D	1	1	5
LUH-72	0	0	3
TH-67/OH-58C	0	1	1
AH/MH-6	0	0	3
Mi-8/17	0	0	0
C-12/UC-35/C-26/UV-20	0	0	6
EO-5C	0	0	0

Continued on next page

Continued from previous page

Synopsis of selected FY13 accidents (* denotes night mission)

Manned Class A

- CH-47D: Chalk 2 trail aircraft contacted a tower on the crew's 3rd landing attempt in dust conditions. The forward main rotor blades struck a mounted MK19 40mm launcher system resulting in ignition of some of the cartridges.

-UH-60A: Aircraft taxied into hangar, entered an uncommanded left yaw and became partially airborne and struck the hangar a second time.

* UH-60M: Aircraft was on approach to a dirt/gravel road adjacent to a man-made pinnacle in the training area when the main rotor blades contacted the upslope of the pinnacle. Crew maneuvered the aircraft forward and set down on the road for shutdown.

* UH-60L: While on a NVG multi-ship training mission under low illumination/low contrast conditions, the crew lost spatial awareness and placed the aircraft in an unrecoverable attitude. The aircraft impacted the ground inverted, fatally injuring the five crewmembers.

- OH-58D: While conducting day multi-ship training, the aircraft experienced an engine control unit failure in flight. Aircraft impacted the ground resulting in one fatal injury. Aircraft was destroyed.

- AH-64D: Aircraft crashed following a catastrophic failure of the main rotor system. Two fatalities.

- UH-60L: During conduct of an air assault mission, the main rotor drooped. Aircraft landed hard. Class A damage reported.

-UH-60M: Aircraft was taxiing when the main rotor blades contacted a concrete barrier wall. Damage reported as Class A.

In the **unmanned aircraft systems**, there were 36 Class A–C incidents with 8 Class A's, 8 Class B's, and 20 Class C's. The Class A's included two Aerostat balloons, five MQ-1s, and one MQ-5B. The RQ-7Bs comprised 14 of the 28 Class B and C mishaps with cause factors relating to engine failures, landing problems, and lost link.

Synopsis of selected accidents (FY13):

UAS Class A

- MQ-1C: Engine failed following indications of overtemp and FADEC failure. UA impacted just off the runway.

- MQ-1C: Engine failed during manual transfer of fuel.

- MQ-5B: Engine experienced rpm fluctuations then failed.

- MQ-5B: During take-off, UA was damaged when it veered off the runway into a concrete drainage ditch.

- MQ-1C: Engine failed due to loss of fuel pressure.

- Aerostat: Tether was severed due to winds during lowering.

- MQ-1B: Operators experienced loss of link with the system during flight.

- MQ-1C: Vehicle experienced low manifold pressure followed by engine failure.

Shared Goal: Standardization and Safety

DAC Charles W. Lent
Directorate of Evaluation and Standardization
U.S. Army Aviation Center of Excellence
Fort Rucker, AL
H-60 SP/IE, Literature Review

Army standardization policy is the management principle which fosters the development and sustainment of a high state of proficiency and readiness among Soldiers and units throughout an organization. The commanding general, U.S. Army Aviation Center of Excellence, is responsible for standardization within the Army aviation branch and is the proponent agency for the U.S. Army Aviation Standardization Program. The process is aimed at reducing the number of Army aviation accidents while recognizing that sound standardization practices also support a proactive safety program.

USAACE develops and establishes policies to ensure units are efficient and effective in their warfighting mission. At every Army level, personnel charged with the management of standardization and safety programs share a common goal – preventing accidents. Standardization serves to develop and ensure compliance with approved procedures while the safety program educates Soldiers through accident awareness and reporting. They go hand in hand: the development of standardized procedures assists the development of safe procedures.

Standardization and safety are closely related and must work together to ensure future accidents are prevented to the maximum extent possible.

The first objective of Army standardization policy **is improvement and sustainment of proficiency and readiness among Soldiers and units throughout the Army**. This is accomplished by universal applications and approved practices and procedures. The Army Aviation Standardization Program, AR 95-1, defines the responsibilities of the aviation branch chief to review changes to AR-95 series publications and designates the Department of the Army to develop, staff and coordinate changes to aviation training and standardization literature.

The aviation branch chief has delegated these responsibilities to the Directorate of Evaluation and Standardization to ensure Army aviation training and technical publications are standardized, accurate and not duplicated. Examples of standardized publications which DES continuously monitors and reviews are Army aircraft operator's manuals and checklists. These technical manuals are essential to the safe and efficient methods of operating Army aircraft and related systems and, when followed, provide guidance to Army aviators to help reduce the number of accidents.

The second objective of Army standardization policy **is *reduction of the adverse effects of personnel turbulence following reassignments.*** This is accomplished at USAACE through a joint effort by DES and Directorate of Doctrine and Training (DODT) to produce doctrinal training materials which govern management of the Aircrew Training Program (ATP) and

Continued on next page

Continued from previous page

aircraft Aircrew Training Manuals (ATM), allowing units in the field to manage and execute a standardized ATP. This program gives commanders a clear direction on assignment, integration and training task requirements for personnel. An example would be an ATM task which has specific conditions, a recommended description, and standards that must be met for task accomplishment.

The third objective of Army standardization policy is ***elimination of local modification of approved standardized practices and procedures.*** The standardization program is approved by senior leaders who ensure information and procedures are standardized and not distorted or changed throughout the aviation branch. The Aviation Branch Chief utilizes DES as a field operating agency to assess units in the field to ensure compliance with the approved ATP and Army aviation standardization policy. IAW AR 95-1, this is accomplished in conjunction with inspections by Aviation Resource Management Survey teams every 12-24 months or at the direction of the Aviation Branch Chief. Over the past 12 years, this has generally been a combat aviation brigade-centric assessment/assistance for deployed units and as a requested tool by CAB commanders to fight complacency during a deployment.

Although priorities and emphasis on skill sets change due to Army requirements, adherence to approved practices and procedures is a critical element in a unit's ability to prevent accidents.

The Army aviation standardization program has proven effective in maintaining a high state of readiness and proficiency for the aviation branch; Army aviation branch standardization and Army safety both share accident prevention as a common goal.

Remember: the development of efficient and effective procedures always lead to safe procedures and effective standardization is a proactive safety program.

DAC Charles W. Lent may be contacted at (334) 255-9098, DSN 558.

WE STILL WANT YOUR INPUT

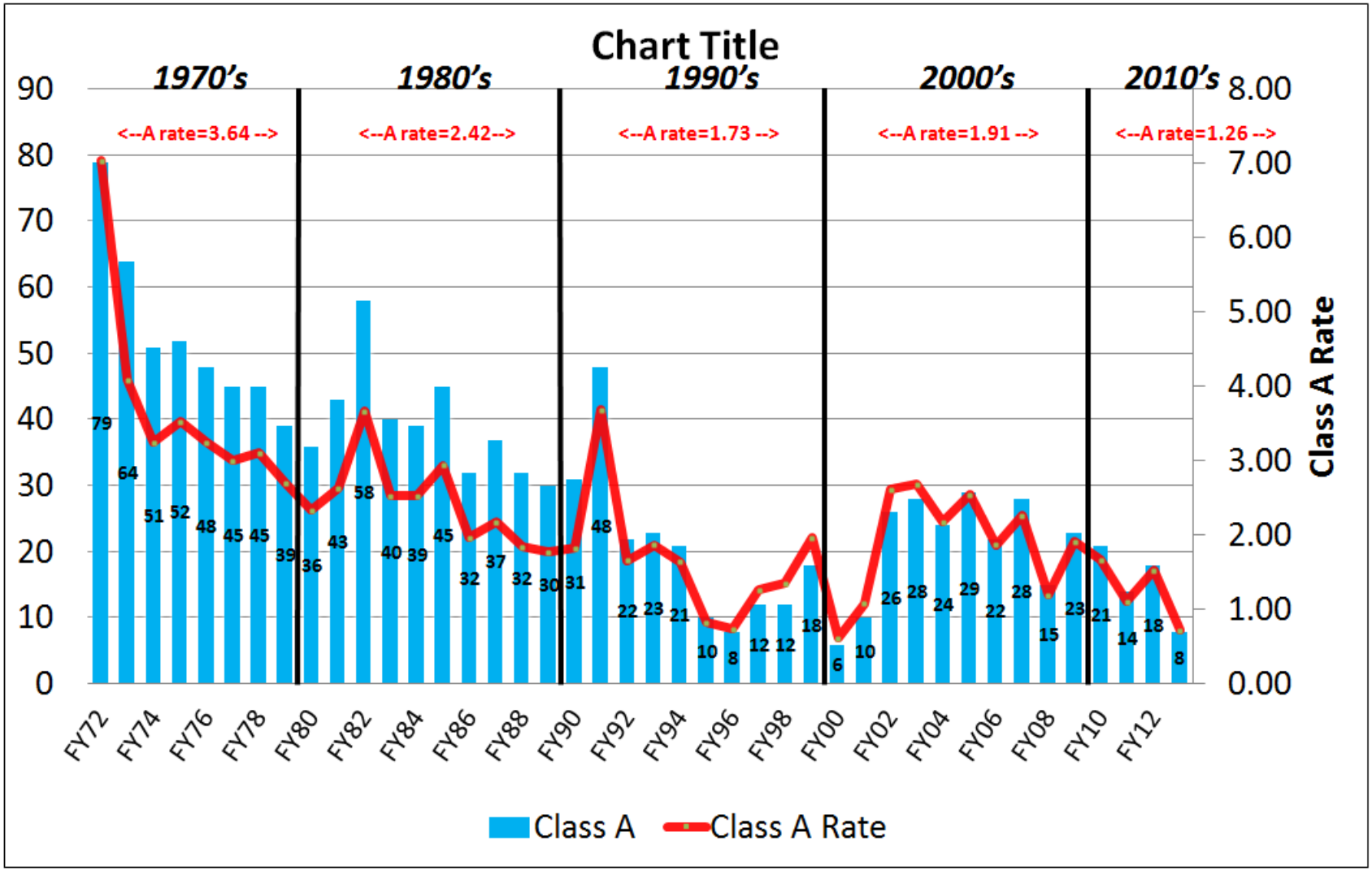
Do you have an aviation related story, information brief, or lesson's learned type event you would like to share with the aviation community? Pass on your experience with an article in Flightfax.

Send them via email to the Aviation Directorate, U.S. Army Combat Readiness/Safety Center:

usarmy.rucker.hqda-secarmy.mbx.safe-flightfax@mail.mil

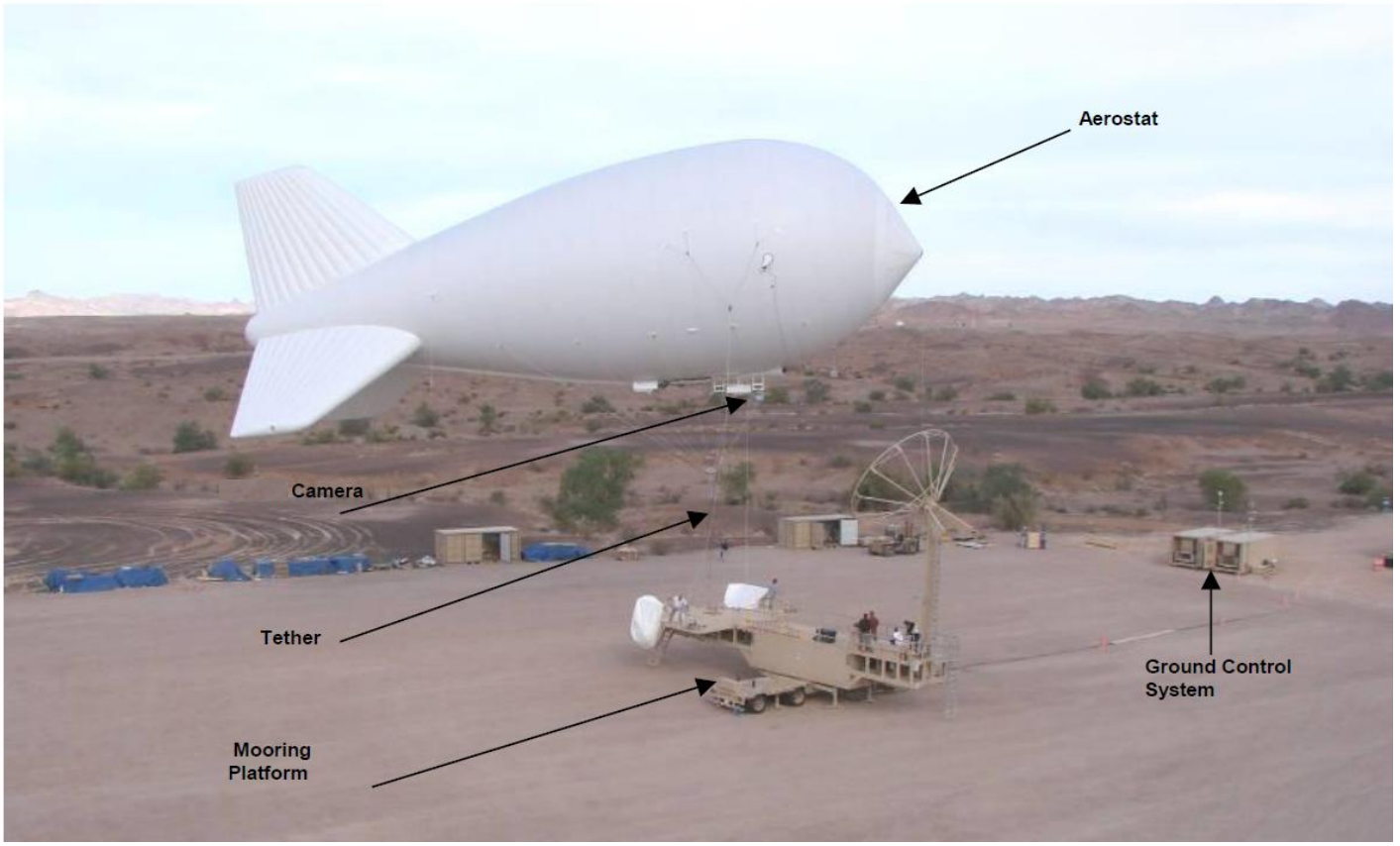
We can also be reached by phone – (334) 255-3530, DSN 558

42 Year Trend (FY1972-FY2013)
Manned Aviation (FW + RW) Class A Flight Accidents and Rate



Rate Per 100,000 Hours
Data as of October 2013

Know your unmanned aircraft



Persistent Threat Detection System (PTDS)

A highly persistent and flexible multi-sensor information collection platform that is integrated with other aerial and unattended ground sensor systems to provide all-weather detection, surveillance, monitoring, and targeting capability of moving vehicle and dismount targets. Integrated into aerial information collection, base defense, and aerial layer network transport architectures to support needs for persistent surveillance, information collection, and communications extension at key operating locations.

Characteristics:

- **Length = 117 ft**
- **Diameter (max) = 52 ft**
- **Helium volume = ~74,000 cubic feet**
- **Extended payload mounting locations**
- **Capable of reaching 9,000 ft AGL**
- **Durable & repairable hull**

Class A – C Mishap Tables

	Manned Aircraft Class A – C Mishap Table									as of 29 Oct 13
	Month	FY 13					FY 14			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities
1st Qtr	October	1	0	7	0			1	3	
	November	0	1	3	0					
	December	2	1	0	0					
2nd Qtr	January	0	0	5	0					
	February	0	0	2	0					
	March	2	1	5	6					
3rd Qtr	April	1	1	6	2					
	May	0	0	4	0					
	June	1	1	3	0					
4th Qtr	July	0	0	5	0					
	August	1	1	6	0					
	September	0	1	0	0					
	Total for Year	8	7	46	8	Year to Date	0	1	3	0

	UAS Class A – C Mishap Table								as of 29 Oct 13
	FY 13 UAS Mishaps					FY 14 UAS Mishaps			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	5	1	0	6	W/GE	1			1
MQ-5	2	0	3	5	Hunter				
RQ-7	0	4	10	14	Shadow		1	1	2
RQ-11					Raven				
RQ-20	0	0	6	6	Puma				
YMQ-18									
SUAV					SUAV				
Aerostat	1	3	1	5	Aerostat	1			1
Total for Year	8	8	20	36	Year to Date	2	1	1	4

They're not just numbers

12 Aug 81 Flightfax

When people talk aviation safety, they almost always include numbers in their discussion. Mishap rates, numbers of destroyed aircraft, and percentages of crew error are some of the more popular figures used in aviation safety discussions and articles. While the use of these numbers is essential in conducting trend analyses and various statistical studies, their full meaning often seems to get lost in the process.

A good example of numbers that really mean something are this year's number of fatalities and dollar losses as a result of Class A aircraft mishaps. As of 12 August 1981, 22 aircrew members have died in 39 Class A aircraft mishaps. These are not just numbers out of the Safety Center computer; they are dead people – dead irreplaceable crewmembers. Their loss affected not only the manning level of their units, the overall readiness of the Army, and the number of replacement aircrew members required from the training command next year, but also the morale of their unit and the lives of their families. They were 22 valuable soldiers. And the truly sad fact is that most of these people contributed to their own deaths through crew error…in most cases those flying the aircraft or supervising the flight violated established procedures.

While these 22 dead crewmembers are a tragic loss to the Army, the loss in combat readiness does not stop there. The 39 Class A aircraft mishaps this fiscal year have cost the Army close to $25 million…enough to put 16 new Cobras on the flight line.

As you walk out to your aircraft on your next flight, think about the fact that as an Army aviator, you are the basic element in the command line of aircraft mishap prevention. Your total dedication to strict air discipline with respect to regulations and rules will do more than any other known remedy to prevent Army aircraft mishaps.

Note: FY1981 ended with a total of 43 Class A mishaps and 27 Army fatalities.

Addendum for FY 13

The numbers for this year (FY2013) currently stand at 8 Class A mishaps resulting in 8 fatalities. Cost estimates to the Army of over $35 million.

Selected Aircraft Mishap Briefs

Information based on preliminary reports of aircraft mishaps reported in September 2013.

Utility helicopters

UH-60 

-M Series. Aircraft was Chalk 2 in a flight of two landing at an HLZ when the aircraft touched down on an upslope. All four main rotor blades made contact with the slope. (Class B)

Unmanned Aircraft Systems

MQ-1C 

UA was approximately 2.5 hours into the flight when the vehicle experienced low manifold pressure and indications of an engine failure. During attempt to return to base the aircraft lost altitude and contacted a ridge. Vehicle recovered but reported as a total loss. (Class A)

Due to the reduction in Class A – C Aviation mishaps reported to the U.S. Army Combat Readiness/Safety Center, we have been experiencing difficulties in filling the back page

KEEP UP THE GOOD WORK

If you have comments, input, or contributions to Flightfax, feel free to contact the Aviation Directorate, U.S. Army Combat Readiness/Safety Center at com (334) 255-3530; DSN 558

U.S. ARMY COMBAT READINESS/SAFETY CENTER

Report of Army aircraft mishaps published by the U.S. Army Combat Readiness/Safety Center, Fort Rucker, AL 36322-5363. DSN 558-2660. Information is for accident prevention purposes only. Specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition.